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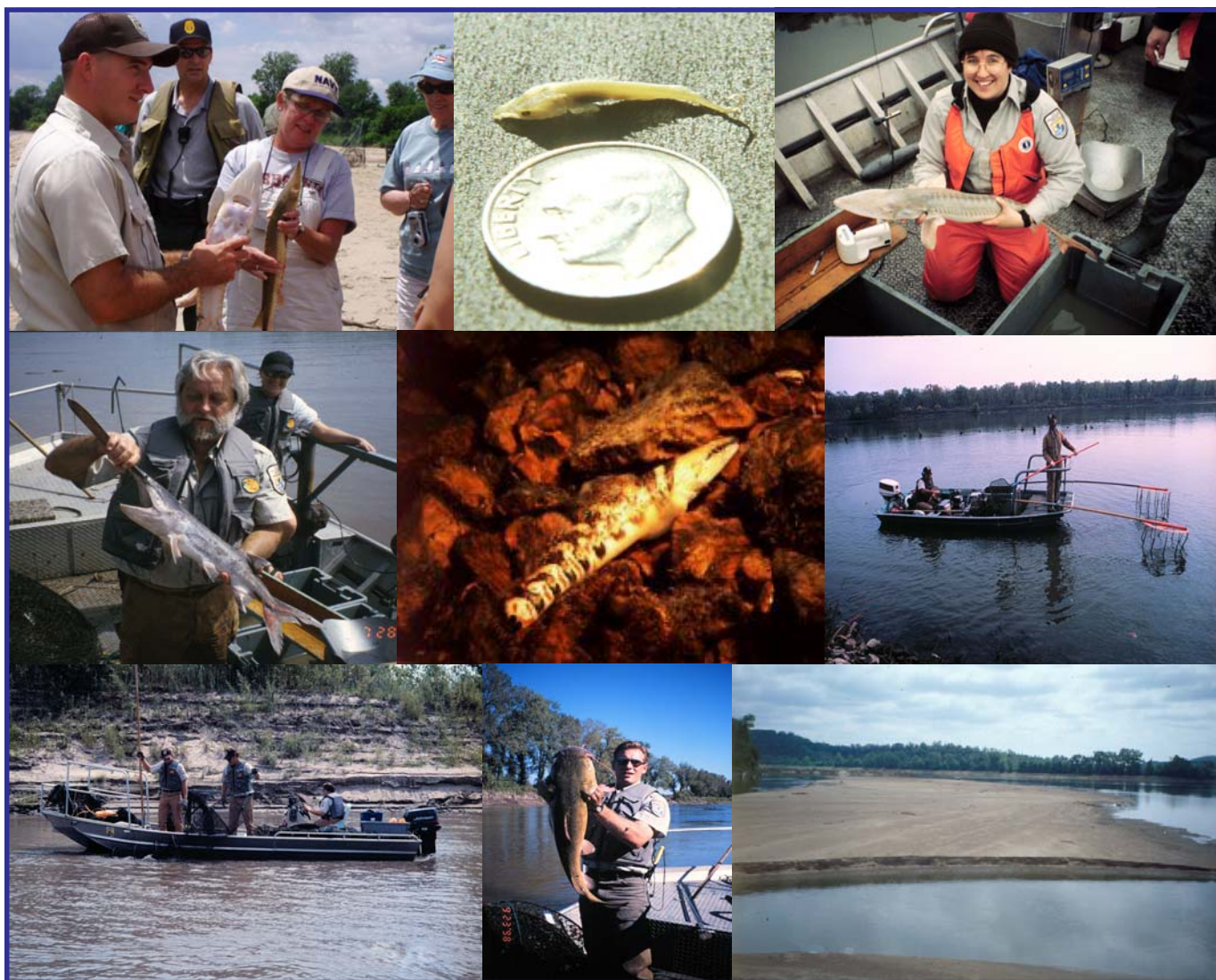
# ***Fish Lines***

## **Region 3 - Great Lakes/Big Rivers**

*Leadership in Conserving, Enhancing, and Restoring Aquatic Ecosystems*

Columbia Fishery Resources Office; Columbia, Missouri

(See the "Station Spotlight" on Page 5)



Series of photos depicting Columbia Fishery Resources Office activities: (Top Row, Lt. to Rt.): Wyatt Doyle showing teachers a shovelnose sturgeon; Larval pallid sturgeon size comparison; Joanne Grady holding a tagged pallid sturgeon; (Middle Row, Lt. to Rt.): Project Leader, Jim Milligan, holding a paddlefish; Threatened Niangua darter; Biologists using electro fishing gear to assess fish in a National Wildlife Refuge lake; (Bottom Row, Lt. to Rt.): Biologists assessing fish populations using a hoop net; Biologist holding a large flathead catfish; Missouri River sandbar habitat.

*To view other issues of "Fish Lines", see our Regional website at: (<http://midwest.fws.gov/Fisheries/>)*



## Region 3 - Great Lakes/Big Rivers Region

The Mission of the U.S. Fish & Wildlife Service: working with others to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people

# Conserving America's Fisheries

## Fisheries Program

### Vision for the Future



The vision of the Service's Fisheries Program is working with partners to restore and maintain fish and other aquatic resources at self-sustaining levels and to support Federal mitigation programs for the benefit of the American public.

Implementing this vision will help the Fisheries Program do more for aquatic resources and the people who value and depend on them through enhanced partnerships, scientific integrity, and a balanced approach to conservation.

### *Strategic Plan Vision Focus Areas*

#### **1. Partnerships and Accountability**

Partnerships are essential for effective fisheries conservation. Many agencies, organizations, and private individuals are involved in fisheries conservation and management, but no one can do it alone. Together, these stakeholders combine efforts and expertise to tackle challenges facing fisheries conservation. The success of these partnerships will depend on strong, two-way communications and accountability.

#### **2. Aquatic Species Conservation and Management**

The Fisheries Program maintains and implements a comprehensive set of tools and activities to conserve and manage self-sustaining populations of native fish and other aquatic resources. These tools and activities are linked to management and recovery plans that help achieve restoration and recovery goals, provide recreational benefits, and address Federal trust responsibilities. Sound science, effective partnerships, and careful planning and evaluation are integral to conservation and management efforts.

#### **3. Public Use**

As the population in the United States continues to grow, the potential for adverse impacts on aquatic resources, including habitat will increase. At the same time, demands for responsible, quality recreational fishing experiences will also increase. The Service has a long tradition of providing opportunities for public enjoyment of aquatic resources through recreational fishing, habitat restoration, and education programs and through mitigating impacts of Federal water projects. The Service also recognizes that some aquatic habitats have been irreversibly altered by human activity (i.e. - dam building). To compensate for these significant changes in habitat and lost fishing opportunities, managers often introduce non-native species when native species can no longer survive in the altered habitat.

#### **4. Cooperation with Native Americans**

Conserving this Nation's fish and other aquatic resources cannot be successful without the partnership of Tribes; they manage or influence some of the most important aquatic habitats both on and off reservations. In addition, the Federal government and the Service have distinct and unique obligations toward Tribes based on trust responsibility, treaty provisions, and statutory mandates. The Fisheries Program plays an important role in providing help and support to Tribes as they exercise their sovereignty in the management of their fish and wildlife resources on more than 55 million acres of Federal Indian trust land and in treaty reserved areas.

#### **5. Leadership in Science and Technology**

Science and technology form the foundation of successful fish and aquatic resource conservation and are used to structure and implement monitoring and evaluation programs that are critical to determine the success of management actions. The Service is committed to following established principles of sound science.

#### **6. Aquatic Habitat Conservation and Management**

Loss and alteration of aquatic habitats are principal factors in the decline of native fish and other aquatic resources and the loss of biodiversity. Seventy percent of the Nation's rivers have altered flows, and 50 percent of waterways fail to meet minimum biological criteria.

#### **7. Workforce Management**

The Fisheries Program relies on a broad range of professionals to accomplish its mission: biologists, managers, administrators, clerks, animal caretakers, and maintenance workers. Without their skills and dedication, the Fisheries Program cannot succeed. Employees must be trained, equipped and supported in order to perform their jobs safely, often under demanding environmental conditions, and to keep current with the constantly expanding science of fish and aquatic resource management and conservation.



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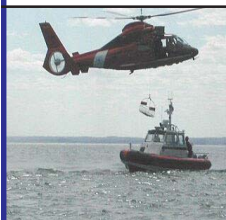
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*Click here to visit our Fisheries Web Site*

# Great Lakes - Big Rivers Region Fisheries Field Offices

## National Fish Hatcheries

National Fish Hatcheries develop and maintain brood stocks of selected fish strains with our primary focus on native species such as lake trout, pallid sturgeon, lake sturgeon and brook trout. Hatcheries also provide technical assistance and sources of fish and eggs to cooperating agencies, provide fish and eggs for research, stock fish and eggs as part of native fish restoration programs, stock fish in fulfillment of federal mitigation obligations and assist with restoration and recovery of native mussels and other native aquatic species.

## Sea Lamprey Control Stations

Sea Lamprey Control Stations assess and control sea lamprey populations throughout the Great Lakes. This program is supported through funding from the State Department and administered through the Great Lakes Fishery Commission.

## Fishery Resources Offices

Fishery Resources Offices perform key monitoring and control activities related to invasive aquatic species; survey and evaluate native fish stocks and aquatic habitats to identify restoration opportunities; play a key role in targeting and

implementing native fish and habitat restoration programs; work with private land owners, states, local governments and watershed organizations to complete aquatic habitat restoration projects under the Service's Private Lands and the Great Lakes Coastal Programs; provide coordination and technical assistance toward the management of interjurisdictional fisheries; maintain and operate several key interagency databases; provide technical assistance to other Service programs addressing contaminants, endangered species, federal project review and hydro-power operation and re-licensing; evaluate and manage fisheries on Service lands; and, provide technical support to 38 Native American tribal governments and treaty authorities.

## Fish Health Center

The Fish Health Center provides specialized fish health evaluation and diagnostic services to federal, state, tribal and private hatcheries in the region; conducts extensive monitoring and evaluation of wild fish health throughout the region; examines and certifies the health of captive hatchery stocks; and, performs a wide range of special services helping to coordinate fishery program offices and partner organizations.

## Fishery Coordination Offices

Fishery Coordination Offices work with Canadian and state natural resource agencies, county, local and tribal governments and other public and private organizations to provide crucial facilitation and inter-agency coordination functions affecting the management of native fishes and aquatic habitats.

## Great Lakes - Big Rivers Region Fisheries Field Offices



# Great Lakes - Big Rivers Regional Fisheries Program

## *Station Spotlight - Columbia Fishery Resources Office*

The Columbia Fishery Resources Office (FRO) was established in 1991. The office is located in Columbia, Missouri and is responsible for fishery management assistance to other Fish and Wildlife Service refuges and offices, Missouri River Natural Resources Committee, Upper Mississippi River Conservation Committee, and other federal and state agencies. The office mission is "To conserve, enhance, and protect aquatic ecosystems in Missouri, Iowa, Illinois, Iowa, and border waters of Kansas and Nebraska in partnership with state and federal agencies, resource managers, and concerned citizens."

Columbia FRO in partnership with Carterville FRO has assisted the 28 states of the Mississippi Interstate Cooperative Resource Association with a basin-wide paddlefish stock assessment database since 1997. Twenty-three states are using this data to develop multi-jurisdictional paddlefish management plans with the Fish and Wildlife Service's assistance.

Columbia FRO chairs the "Middle Basin Pallid Sturgeon Recovery Workgroup" made up of state, federal, and university biologists working to restore endangered pallid sturgeon populations in the lower Missouri and middle Mississippi Rivers. Biologists assessed pallid sturgeon populations from 1996 through 2000. This assessment indicated that the number of pallid sturgeon had declined and that hybridization with the common shovelnose sturgeon had increased from a previous study. Columbia FRO staff continues to monitor pallid sturgeon in the lower Missouri River working with the U.S. Army Corps of Engineers and state fish and game agencies to establish a long-term monitoring program for this critically endangered species. Columbia FRO works cooperatively with the Neosho NFH to tag and stock pallid sturgeon.



-USFWS

**Columbia Fishery Resources Office biologist, Wyatt Doyle, holds an endangered pallid sturgeon captured during a winter assessment on the Big Muddy National Fish and Wildlife Refuge on the Missouri River. Biological data is collected and fish are immediately returned to the water.**



-USFWS

### **Columbia Fishery Resources Office Staff**

**Left to Right: Andy Starostka, Wyatt Doyle, Jim Milligan, Joanne Grady, Louise Mauldin**

A high priority of this office is to monitor restored aquatic habitat on the lower Missouri River. Fish populations are assessed at natural and man-made habitat restoration sites on several units of the Big Muddy National Fish and Wildlife Refuge. The goal of this project is to determine "what works" and to use this information to guide future habitat restoration projects in order to provide spawning and nursery areas for native fish such as paddlefish and sturgeon.



-photo by Jim Whitly

**Aerial photo of pallid sturgeon, piping plover, and least tern habitat on the Missouri River in Big Muddy National Fish & Wildlife Refuge.**

The newest challenge of the Columbia FRO is the invasion of exotic Asian carp species in the lower Missouri River. These invasive fish may threaten native fish and shellfish. The Columbia FRO is working with partners to develop a control plan for Asian carp and other invasive species.

For detailed information about Columbia Fishery Resources Office, contact the office at: **(573) 234-2132** or visit their website at:

<http://midwest.fws.gov/columbiafisheries/>



# Partnerships and Accountability

## Genoa National Fish Hatchery Divers assist in Search for Elusive Winged Mapleleaf Mussel

Regional dive team members from Genoa National Fish Hatchery (NFH) joined State and University of Minnesota divers on a winged mapleleaf mussel search carried out on the St. Croix River in eastern Minnesota. This project is part of a multiple agency initiative to save this extremely rare and federally endangered mussel from possible extinction and expand the mussel's range to areas previously occupied. State and federal divers have been working through the summer months to locate and centralize specimens of the Winged Mapleleaf within the St. Croix River near Taylor Falls, Minnesota.

Experts believe that concentrating a portion of the remaining adult population of this species into a known area will enhance its reproductive ability. Surveys in recent years have noted a very depressed incidence of gravid (egg bearing) mussels in this, the only surviving population of this species in the world. If this operation is successful, and the percentage of gravid female mussels increase, plans call for a very limited amount of larvae to be collected for further research on its complicated life cycle. As with most freshwater mussels in North America, the winged mapleleaf requires a "host" organism for its larvae to develop successfully. One of the challenges that management agencies face is that the "host" is unknown. Research into this mystery has been carried out at the University of Minnesota and the Upper Midwest Science Center, La Crosse, Wisconsin,

with limited and inconclusive results. Further trials scheduled for the fall of 2003 may shed light on this elusive question and provide researchers and managers a possible tool to bring this rare and beautiful mussel back to its former range. For more information on this project or to learn more about the availability of the Regional Dive Team contact Nick Rowse, Regional Dive Master at 612-725-3548 x210.

*Roger Gordon, Genoa NFH*



-USFWS

**The winged mapleleaf is a federally endangered mussel that can only be found in the St. Croix River which borders Minnesota and Wisconsin. Researchers are exploring options to return this rare and beautiful mussel back to its historical range.**

## Lake Sturgeon Coordination Meeting in Michigan

A lake sturgeon coordination meeting was hosted by Michigan Department of Natural Resources (DNR) in August at Gaylord, Michigan. The meeting brought state, federal, and university researchers and managers together to discuss ongoing efforts to restore this native Great Lakes species to Michigan waters of the Great Lakes. Participants provided updates on research and

management efforts throughout Michigan.

Jerry McClain, Alpena Fishery Resources Office (FRO), provided an overview of lake sturgeon restoration activities being conducted by the Alpena FRO in Lake Huron and connecting waterways. John Weisser, Marquette Biological Station, addressed questions related to the effect of lampricide treatments on populations of lake sturgeons. Since the "Interim Protocol for Application of Lampricides to Streams with Populations of Young-of-Year Lake Sturgeon (*Acipenser fulvescens*)" was implemented in 1998, no mortality of lake sturgeon has been observed during lampricide applications in the United States. Members of the Lake Sturgeon Committee determined that the "State of Michigan Department of Natural Resources Lake Sturgeon Rehabilitation Strategy" published in 1997 needed to be revised, and may change the number and composition of streams that require the use of the interim lampricide treatment protocol.

Also participating in the meeting were biologists from the Michigan DNR Sturgeon Management Team, researchers from Michigan State University, Lake Superior State University, Michigan, and a representative from Sturgeon for Tomorrow. These meetings are excellent opportunities to enhance interagency coordination and collaboration for basin wide restoration efforts.

*Jerry R. McClain, Alpena FRO  
John Weisser, Marquette  
Biological Station*

## Congressional Staff Learn About Sea Lampreys

At the request of the Great Lakes Fishery Commission (Commission), Fish and Wildlife Service staff (Denny Lavis, Ellie Koon, Kevin Butterfield – Ludington Biological Station; Mike Fodale, Shawn Nowicki – Marquette Biological Station) along with staff from the Sea Lamprey Control Centre (Fisheries Oceans Canada, Sault Ste. Marie, Ontario) participated in a tour August 13-14 for Congressional staff interested in Great Lakes issues. Staff from 13 Representatives, 1 Senator, the House Science subcommittee on the Environment, Technology and Standards, and the Northeast-Midwest Coalition were present. In addition to the Commission, agencies sponsoring the tour included the Great Lakes Environmental Research Laboratory (National Oceanic and Atmospheric Administration), Great Lakes Science Center (U.S. Geological Survey), Great Lakes Sea Grant Network, and the Great Lakes Commission.

With the Welland Canal in Niagara Falls, Ontario as a backdrop and with a display depicting all facets of sea lamprey control in the Great Lakes, Fish and Wildlife Service staff explained the devastation caused by one invasive species, the sea lamprey, in the Great Lakes and what has been accomplished to date to control the pest. Following this initial orientation and later in the tour, Congressional staff were provided an opportunity to view assessment and control techniques streamside on Delaware Creek (Erie County, New York). There, staffers viewed a mock lampicide application and stream survey methods as Fish and Wildlife

Service staff stressed the importance of current control methodologies and the search for, and implementation of, alternative control strategies as part of the integrated control program for sea lampreys. Staff had further opportunity to interact one on one with the Congressional staff and answer questions during an evening social presented by the sponsoring agencies at Fort Smith in Niagara-on-the-Lake, Ontario. *Dennis Lavis, Ludington Biological Station*



-GLFC

**Ellie Koon, Ludington Biological Station, explains sea lamprey control techniques to Congressional staff.**

## Lake Sturgeon Coordination Meeting with the Great Lakes Science Center

Assistant Project Leader Tracy Hill, Project Leader Jerry McClain, and Fishery Biologist James Boase of the Alpena Fishery Resources Office (FRO) met with Bruce Manny of the U.S. Geological Survey (USGS) Great Lakes Science Center to coordinate lake sturgeon activities. The USGS and Fish and Wildlife Service are working jointly in the Detroit and St. Clair Rivers in Michigan to gather information on lake sturgeon populations in those waters. The purpose for the meeting is to develop work plans for activities planned for 2004 in the Detroit River and to explore

opportunities for collaboration on a juvenile lake sturgeon project that is being conducted in the St. Clair River by the Alpena FRO during fall 2003. A work plan was finalized for the spring 2004 Detroit River work and the Great Lakes Science Center will be assisting Alpena FRO along with other partners on the juvenile lake sturgeon project on the St. Clair River. Assistance provided to the USGS Great Lakes Science Center with lake sturgeon studies strengthens partnerships between our agencies and provides a direct benefit to lake sturgeon populations in the Detroit River. *Tracy D. Hill, Alpena FRO*



-USFWS

**The U.S. Geological Survey and Fish and Wildlife Service work together in the Detroit and St. Clair Rivers to gather information on lake sturgeon populations.**

## Service Biologist Maps Stocking Trips of M/V Togue

Fishery biologist Aaron Woldt of the Alpena Fishery Resources Office (FRO) created a GIS based map of trips made during 2003 by the offshore lake trout stocking vessel M/V Togue. The M/V Togue, based in Cheboygan, Michigan, is the Fish and Wildlife Service's stocking vessel used to plant yearling lake trout in U.S. waters of Lakes Huron and Michigan in support of interagency lake trout



rehabilitation programs. Woldt worked with Boat Captain Mike Perry to obtain coordinates for all waypoints and lake trout stocking locations used by the M/V Togue in Lakes Huron and Michigan. Woldt created a map showing trip paths, waypoints, stocking locations, total miles traveled, and number of fish stocked.

In 2003, the M/V Togue traveled 1,090 miles in Lake Huron stocking 1,047,180 yearling lake trout and 1,633 miles in Lake Michigan stocking 2,026,571 yearling lake trout. Woldt formatted a poster sized electronic version of the map. This map will be used by Region 3 personnel to educate public and Fish and Wildlife Service employees.

*Aaron P. Woldt, Alpena FRO*



-USFWS

Lake trout stocking vessel, M/V Togue

The M/V Togue is the only hatchery fish distribution vessel on the Great Lakes. Stocking lake trout on historical spawning reefs is a critical component to rehabilitate this native species. A new vessel is being constructed which will alleviate safety concerns, add assessment capabilities, and perform additional operations as a result of the 2000 US vs. Michigan Consent Decree.

## La Crosse Fishery Resources Office Supports U.S. Geological Survey on National Water Quality Assessment Study

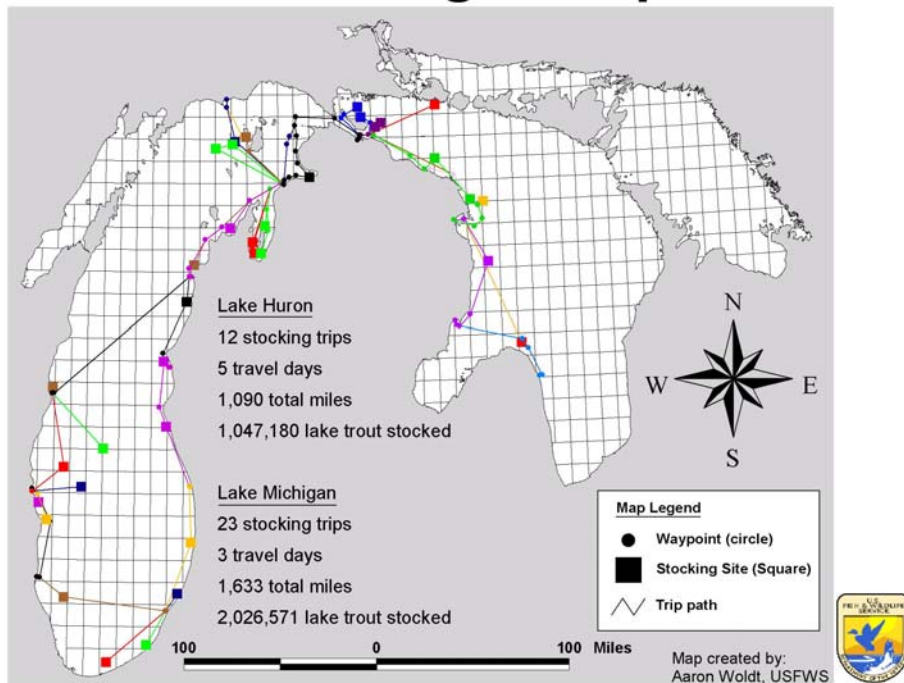
La Crosse Fishery Resources Office (FRO) receives frequent requests for assistance from several partners on a wide variety of fishery issues. During the week of August 25th personnel from La Crosse FRO assisted the Iowa City Office of the U.S. Geological Survey on their National Water Quality Assessment (NAWQA) program. This program was implemented in 1991 to support informational needs and decisions related to water-quality management and policy. The NAWQA Program is designed to answer questions concerning our nation's water resources.

Information on water chemistry, physical characteristics, stream habitat, and aquatic life are collected. This allows resource managers to make science-based decisions on water quality issues.

La Crosse FRO has been called on to provide their expertise on the fishery aspects of this project. Three sites along the Iowa River and one site on the Wapsipinicon River, both in Iowa, were electro fished to determine the fish community structure. All fish were identified to species, weighed, and measured. This fishery information will be analyzed in combination with the other aspects of the study which will allow water resource managers to make informed decisions. The NAWQA Program has been active for over ten years and 42 of the original 51 Study Units will be reassessed for an additional ten years.

*Scott Yess, La Crosse FRO*

## 2003 MV Togue Trips



-USFWS

Over 2700 miles were traveled by the Fish and Wildlife Service vessel M/V Togue during lake trout stocking operations in 2003. Each year approximately 3 million lake trout yearlings are stocked on 35 to 51 reefs in Lake Michigan and Lake Huron from mid-April through early July.





-USGS

**La Crosse FRO biologist Scott Yess assisted the U.S. Geological Survey-Iowa City Office with their National Water Quality Assessment program.**

### **Green Bay Fishery Resources Office Hosts Wisconsin Stock Assessment Group Meeting**

Several assessment models are currently being developed for Great Lakes fisheries in Wisconsin. To facilitate the development process, staff from the Wisconsin Department of Natural Resources (DNR), and Green Bay Fishery Resources Office (FRO) have formed an assessment working group. A quality fishery assessment relies on expertise in many areas including survey design, mathematical methodologies, fish biology, and data management. Each assessment can benefit from the broad range of expertise represented in this group.

At this first meeting, John Netto of the Green Bay FRO presented an outline of the assessment process for the 1836 Treaty waters of the Great Lakes and presented updates on the two Statistical Catch at Age models he has been developing with Justine Hasz and Paul Peeters from the Wisconsin DNR. The group will meet several times per year to review individual assessment models and programs, present relevant research, and provide education on technical topics. The improvements to the quality of

fishery assessments and management in Wisconsin will enhance the sustainability of these stocks and the fishing opportunities they provide.

*John Netto, Green Bay FRO*

### **Fish Collections for Contaminant Analysis**

Staff from the Ashland Fishery Resources Office (FRO) collected predators and prey fish from Miners Lake, Michigan for the Environmental Protection Agency (EPA). Miners Lake is in a remote location at Pictured Rocks National Lakeshore on Lake Superior. Canoes and gill net gear were carried overland into the lake. The EPA will analyze these fish for organic contaminants.

*Paul Bergman, Ashland FRO*

### **Great Lakes Fishery Commission Workshop on Fish Community Change**

Charles Bronte, fishery biologist at Green Bay Fishery Resources Office (FRO), attended the third workshop for Salmonid Communities in Oligotrophic Lakes Symposium (Symposium) conducted by the Board of Technical Experts, Great Lakes Fishery Commission during August at Lac Deluge in Quebec.

The Symposium explored changes in each of the Great Lakes, developed predictive models of the changes, and integrated the resulting information into a synthesis for predicting future direction of fish communities in each Great Lake. Bronte served as the lead author of the Lake Superior case history paper.

*Charles Bronte, Green Bay FRO*

### **Partnerships and Accountability for our Fisheries Program**

Partnerships and accountability are essential elements of our vision for effective fisheries conservation in Region 3. Many agencies, organizations, and private individuals are involved in fisheries conservation and management, but no one can do it alone. Together, we and our partners combine efforts and expertise to tackle challenges facing fisheries conservation. We have many partners for aquatic resource projects that are currently conducted in Region 3 and are involved with a number of initiatives.

The success of these partnerships depends on strong, two-way communications and accountability. Our goals are to maintain, develop, and improve long-term partnerships with States, Tribes, other federal agencies, non-governmental organizations (NGOs), and other Fish and Wildlife Service Programs for collaborative conservation strategies for aquatic resources, and to report short and long-term progress toward meeting resource goals for fish and other aquatic resources.

**Our State Partners in the Great Lakes/Big Rivers Region:**

**Illinois** at <http://dnr.state.il.us/>

**Indiana** at <http://www.in.gov/dnr/>

**Iowa** at <http://www.iowadnr.com/>

**Michigan** at <http://www.michigan.gov/dnr>

**Minnesota** at <http://www.dnr.state.mn.us/index.html>

**Missouri** at <http://www.conservation.state.mo.us/>

**Ohio** at <http://www.dnr.state.oh.us/>

**Wisconsin** at <http://www.dnr.state.wi.us/>

*Regional Fisheries Website at <http://midwest.fws.gov/Fisheries/v-partners.htm>*

# Aquatic Species Conservation and Management

## Fish and Wildlife Service Surveys Lake Huron Lake Trout Reefs for Predaceous Round Goby

The Fish and Wildlife Service's Alpena Fishery Resources Office (FRO) surveyed three historical lake trout spawning reefs in northern Lake Huron for the presence of the exotic round goby (goby). The goby is an invasive nuisance fish species that negatively impacts native species where they are found through their aggressive nature, competition for food and habitat, egg predation, and rapid proliferation in waters where they become established. Goby have been detected in near shore and offshore areas of the Great Lakes; however, their distribution has not been defined.

Due to their traits, goby may be a severe detriment to lake trout rehabilitation efforts in the Great Lakes. Rehabilitation of lake trout in northern Lake Huron will require repopulation of historically important spawning reefs. Information on presence/absence of goby on those reefs is essential to determine possible rehabilitation impediments. In order to meet this need, the Alpena FRO used setlines to examine three northern reefs for the presence of goby in August. The reefs examined were Spectacle Reef, Reynolds Reef, and Rubins Hump. Goby were not found on any of the reefs despite the presence of goby in the nearby Cheboygan River.

Lake trout assessment activities conducted by partner offices and Alpena FRO will help determine current lake trout spawning activities at these reefs and potential impacts if goby become established. This project was funded in part by the Fish and

Wildlife Service's Challenge Cost Share Grant Program.

*Anjanette K. Bowen, Alpena FRO*



The round goby is an invasive species in the Great Lakes.

## Fish and Wildlife Service and National Park Service Monitor the St. Croix River for Zebra Mussels

Divers from both the National Park Service and the Fish and Wildlife Service searched for zebra mussels during the third week of August in the St. Croix River which borders Minnesota and Wisconsin. They started just north of the Stillwater Bridge near Stillwater, Minnesota and worked their way south. The dive team changed their monitoring technique, in an effort to cover the substrate more thoroughly and try to detect the leading edge of zebra mussel reproduction. This strategy worked nicely and the first sign of reproduction was determined to be just south of Hudson, Wisconsin. The exotic mussels were found near a marina and a popular boating location. Reproduction was apparent; however, the number of zebra mussels was less than 5 per square meter.

One additional dive will be conducted in October. Data from the three annual dives will be

analyzed along with data from multi-plate monitoring to form recommendations, which will be presented to the St. Croix Zebra Mussel Task Force. The data gathered from the monitoring of zebra mussels is vital to resource managers to reduce the impact of this exotic species and used in recovery plans for two species of federally endangered mussels.

*Scott Yess, La Crosse FRO*



-USGS

### Zebra Mussel

Dive teams from the National Park Service and Fish and Wildlife Service monitor invasive zebra mussel range expansion in the St. Croix River near Hudson, Wisconsin.

## U.S. Sea Lamprey Control Program Destroys Lampreys to Save Lake Trout

During August, the Fish and Wildlife Service's sea lamprey control program treated 4 Great Lakes streams (1 in Lake Superior, 1 in Lake Huron, and 2 in Lake Michigan) with lampricide to eliminate larval sea lamprey populations. Treatments destroyed an estimated 2.5 million sea lampreys including about 155,500 that would have metamorphosed to the parasitic phase in 2003 and entered the Great Lakes. There, each parasitic phase sea lamprey is capable of killing upwards of 40 pounds of lake trout and salmon



during its year long life in the lakes. The Fish and Wildlife Service's sea lamprey control program is conducted under contract with the Great Lakes Fishery Commission. The successful control program continues to ensure sport fish rehabilitation in the Great Lakes and protects a fishery valued at over \$4.0 billion.

*Dennis Lavis, Ludington Biological Station*



-GLFC

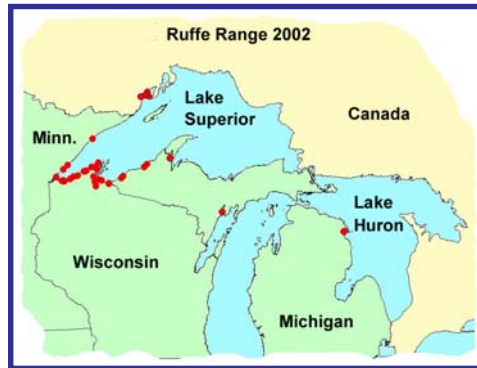
Parasitic sea lampreys are attached to this lake trout. The sea lamprey is an invasive species in the Great Lakes capable of killing upwards of 40 pounds of lake trout and salmon.

### Ruffe Surveillance Expands in Lake Michigan

In cooperation with the Indiana and Wisconsin Departments of Natural Resources, the Ashland and Green Bay Fishery Resources Offices (FRO) expanded surveillance for invasive Eurasian ruffe into four additional ports in Lake Michigan after ruffe were discovered last year near Escanaba, Michigan. Surveillance consisted of bottom trawling, and targeted the busy shipping ports of Portage, Indiana, and Milwaukee, Sturgeon Bay, and Green Bay (Fox River estuary), Wisconsin. No ruffe were captured, but surveyors encountered large catches of the invasive fish, round goby, in the ports of Portage and Sturgeon Bay. Large catches of live and dead specimens of alewife were

collected from the port of Milwaukee as well as a few exotic threespine sticklebacks. Fair catches of yearling yellow perch from the port of Portage was encouraging for the yellow perch fishery in southern Lake Michigan. Young-of-the-year channel catfish dominated the catches from the Fox River.

*Gary Czypinski, Ashland FRO*



-USFWS

The red dots indicate confirmed sightings of invasive ruffe in the Great Lakes. Ruffe surveillance expanded in Lake Michigan this year after a specimen was discovered near Escanaba, Michigan in 2002.

### Ruffe Population Investigations Cycle Completed in Four Lake Superior Tributary Estuaries

Ruffe Population Investigations is a long term study comparing fish abundance in four Lake Superior tributary estuaries containing the nuisance fish, Eurasian ruffe. The goal of the study is to monitor for potential influences of ruffe on the native fish communities. After 8 years of monitoring, one trend has been tested to be weakly significant in three of the estuaries - yellow perch abundance declines in areas when ruffe abundance increases. In 2003, this trend continued. Ruffe abundance increased in two estuaries and perch abundance declined. Ruffe abundance declined in one estuary and perch

abundance increased. Ruffe abundance declined in one estuary while perch abundance remained at zero, the same level estimated during 2002.



-USFWS

The invasive ruffe may pose a serious threat to aquatic ecosystems and to sport and commercial fishing. First discovered in western Lake Superior in 1986, ruffe populations have rapidly expanded to areas throughout the upper Great Lakes.

*Gary Czypinski, Ashland FRO*

### Lake Sturgeon Work in the St. Lawrence River may apply to the St. Clair River

Fishery Biologist James Boase from the Alpena Fishery Resources Office (FRO) and biologist Bruce Manny from U.S. Geological Survey Great Lakes Science Center visited Montreal, Quebec on July 20-23 to learn about lake sturgeon recovery efforts taking place on the St. Lawrence River. Boase worked with Quebec biologist Michel La Haye locating and sampling juvenile lake sturgeon at two locations in the St. Lawrence River. In addition, Boase visited two natural and one artificial lake sturgeon spawning sites. One of the primary goals of the visit was to learn about the habitats required by juvenile lake sturgeon and apply that information to upcoming research that will take place on the St. Clair River in southern Lake Huron. The second

goal was to learn about the spawning habitats required by adult lake sturgeon and apply that knowledge to the ongoing research taking place on the Detroit River, also in southern Lake Huron. The work on the Detroit River involves the construction of an artificial lake sturgeon spawning reef adjacent to Belle Isle.

The trip to Quebec provided an excellent opportunity for Boase to interact with one of the few biologists able to identify habitat required by juvenile lake sturgeon in large connecting waterways of the Great Lakes. The information learned from the biologists in Quebec has direct application to other connecting waterways in the Great Lakes and is vital to our rehabilitation efforts. The visit to Quebec provided a unique opportunity to work in the field with biologists who have been successful at capturing juvenile lake sturgeon in the large connecting waterways of the Great Lakes and provided the opportunity to explain the Fish and Wildlife Service's mission and efforts to restore native fish. In addition, knowledge gained from the trip will aid the Fish and Wildlife Service in focusing its energy and limited resources to rehabilitate lake sturgeon in the Great Lakes.

*James C. Boase, Alpena FRO*



-USFWS

Canadian biologists and a Fish and Wildlife Service biologist sample for juvenile lake sturgeon in the St. Lawrence River.

### Lake Sturgeon Tagging and Distribution Operations begin at Genoa National Fish Hatchery

Annual tagging and distribution of thousands of juvenile lake sturgeon has begun at Genoa National Fish Hatchery (NFH). These fish, destined for restoration projects in Wisconsin, Minnesota, Missouri, and Region 4 are part of the Fish and Wildlife Service's commitment to return this unique native fish to waters across the Midwest.

The Fish and Wildlife Service works in partnership with state and tribal governments, annually stocking three distinct populations or "strains" of lake

sturgeon from Genoa NFH near Genoa, Wisconsin. The majority of fish are cultured at the facility for approximately five months before release in late summer at approximately 8 inches in length.

*Roger Gordon, Genoa NFH*



-USFWS

Juvenile lake sturgeon are microtagged prior to release. Resource biologists will use tag information to monitor restoration programs.



-USFWS

Pictured are just a few of the invasive species now established in the Great Lakes/ Big Rivers Region



## Public Use

### Live Paddlefish Displayed for Habitat Project Dedication of Polander Lake

Staff from the La Crosse Fishery Resource Office (FRO) netted four paddlefish for viewing by the public at the Polander Lake Dedication held August 7 at the Winona District of the Upper Mississippi River National Wildlife and Fish Refuge (NW&FR). The rare fish were viewed by over 100 visitors, including Ron Kind's and Gil Gutnecht's Congressional aides. Reactions to the large prehistoric fish were varied. Some people were unaware that such a beautiful fish existed, while others were delighted to set their eyes on the unusual creature that they had only read or heard stories about. To add to the delight, another ancient species, the silver lamprey, was attached to the fish, showing the public a real life example of external parasitism.

The dedication ceremony, a celebration of the completion of a habitat improvement project, was hosted by the Winona District of the Upper Mississippi River NW&FR. Prior to construction of this project, concerns were raised about possible negative impacts on paddlefish habitat. La Crosse FRO completed a pre- and post-construction study on habitat use of the area and found that paddlefish have not been negatively impacted. In fact, it appears that paddlefish habitat was enhanced. The four paddlefish were captured in an area that was dredged as part of the project. Use of this area by paddlefish was not documented in the pre-construction study, but frequent use is documented in the post-construction studies.

*Ann Runstrom, La Crosse FRO*



-USFWS

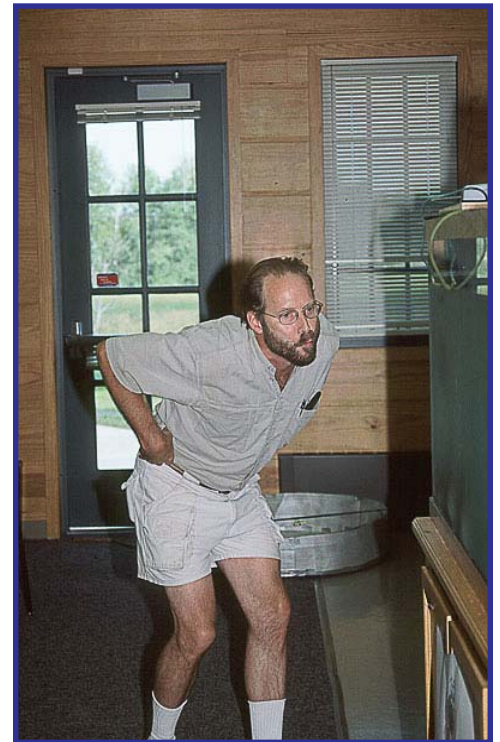
**Ann Runstrom, La Crosse Fishery Resources Office, holds a paddlefish that found a temporary home in a viewing tank at the Polander Lake Dedication.**

### Brook Trout Flotilla and Calling Contest at Whittlesey Creek

Ashland Fishery Resources Office (FRO) staff assisted at Whittlesey Creek National Wildlife Refuge with outreach events held during the Refuge Centennial "Superior Celebration." At the Brook Trout Flotilla, the public was invited to paddle canoes and kayaks on a route that simulated the migration of brook trout out of a Lake Superior tributary (Fish Creek), into Lake Superior past Whittlesey Creek, and then back to Fish Creek. Participants were led to Fish Creek to learn about its value to fish and wildlife from a Wisconsin Department of Natural Resources biologist, and then to Whittlesey Creek where Henry Quinlan of Ashland FRO spoke about its values. Ashland FRO student biologist Paul Bergman conducted a mark and recapture demonstration using participants.

The other event was a brook trout calling contest. Ashland FRO and Iron River National Fish Hatchery staff assisted with the calling contest, a fun event where 20 participants tried to get a reaction from brook trout in an aquarium by calling to them.

*Mark Dryer, Ashland FRO*



-USFWS

**Over 20 participants of the Brook Trout Flotilla and Calling Contest tried to get a reaction from brook trout in an aquarium by calling to them!**

### Rifle River Restoration Committee Meeting

Fishery Biologist James Boase, Alpena Fishery Resources Office (FRO) traveled to Sterling, Michigan on July 30 to attend the Rifle River Restoration Committee Meeting. Boase gave a PowerPoint presentation titled "Lake Sturgeon Rehabilitation Efforts in the Great Lakes." The 30 minute presentation was attended by approximately 55 members of the group. The two main points of the presentation focused on: 1) current efforts to establish new lake sturgeon spawning sites in the connecting channels between Lakes Huron and Erie, and 2) characterization of sturgeon spawning sites in smaller tributaries, such as the Rifle River. The goal of the meeting was to inform members

about the potential of providing lake sturgeon spawning habitat while at the same time stabilizing areas impacted by erosion on the Rifle River. The presentation was well received by members of the group. The forum provided an excellent opportunity to explain how the Alpena FRO and the Fish and Wildlife Service are working with state and local governing bodies as well as private citizens to rehabilitate lake sturgeon populations throughout the Great Lakes. Specifically, the presentation focused on the role that Fishery Resources Offices have in this endeavor. The benefits of native species restoration were clearly defined and explained.

*James C. Boase, Alpena FRO*

### More to "Honk" about than just Ducks at the 5th Annual Ducks Unlimited Festival in Oshkosh, Wisconsin

The 5th Annual Ducks Unlimited Great Outdoors Festival was held on August 15-17 at the Experimental Aircraft Association (EAA) Airfield in Oshkosh, Wisconsin. La Crosse Fishery Resources Office (FRO) employee Heidi Keuler and volunteer Matt Keuler worked in the Fish and Wildlife tent at the La Crosse FRO and Upper Mississippi River National Wildlife and Fish Refuge (NW&FR) displays. Exotic species such as the round goby, zebra mussel, and the Asian carp and native species such as mussels, paddlefish, and lake sturgeon were some of the subjects featured by the La Crosse FRO display. The La Crosse District of the Upper Mississippi River NW&FR displayed duck identification (Ducks on a Stick) art work from the Junior Duck Stamp Contest, the Wisconsin Centennial Quilt,

and information about the Refuge. Other Fish and Wildlife Service exhibitors included Necedah National Wildlife Refuge (NWR), Whittlesey Creek NWR, Horicon NWR, Ecological Services Office, Wisconsin Private Lands Office, and several others. This was a great event to inform people and answer questions about invasive and native aquatic species. La Crosse FRO received a great opportunity to "honk" their horn about their current projects and accomplishments and how they help conserve important natural resources for future generations.

*Heidi Keuler, La Crosse FRO*



*-USFWS*

The Wisconsin Centennial Quilt was displayed at the Ducks Unlimited Festival in Oshkosh, Wisconsin. The Fisheries booth fielded questions about invasive and native fish and mussel species.

### Sea Lamprey Management Display More Than a "Fair" Exhibit!

Personnel from the Marquette Biological Station traveled to Escanaba, Michigan in August to staff the Sea Lamprey Management display at the Michigan Upper Peninsula State Fair. The Sea Lamprey display was adjacent to the Seney National Wildlife Refuge Centennial display and the combined displays provided tens of

thousands of visitors a convenient opportunity to see two of the vital programs of the Fish and Wildlife Service and what they are doing to protect and enhance the resources of Michigan and the Great Lakes. As usual, the aquariums of live sea lampreys and native fish were big attractions successfully competing with thrill rides and cotton candy for the attention of the younger crowd.

*Terry Morse, Marquette Biological Station*



*-GLFC*

The aquarium with live sea lampreys is always a hit as an educational tool for the sea lamprey control program.

### Brook Trout Stocking Ceremony and Public Outreach Event

In conjunction with the National Wildlife Refuge (NWR) System Centennial Celebration at Whittlesey Creek NWR, Ashland Fishery Resources Office (FRO) and Whittlesey Creek NWR held a public event on August 9 to commemorate brook trout rehabilitation activities underway in Wisconsin waters of the Lake Superior basin, specifically the initial stocking of "coaster" brook trout into Whittlesey Creek under a joint Fish and Wildlife Service and Wisconsin Department of Natural Resources (DNR) plan.



Prior to stocking, presentations were given by the Fish and Wildlife Service, Wisconsin DNR, Trout Unlimited, Bad River Tribe and Senator Feingold's Office. More than 100 people attended the event and helped stock brook trout. In addition, 16 posters describing brook trout rehabilitation activities were prepared by partner agencies and organizations and displayed at the Northern Great Lakes Visitor Center. The event received media coverage from radio, newspapers, and a weekly television outdoors show.  
*Mark Dryer, Ashland FRO*



-photo by Greg Alexander

**Coasters are brook trout that live at least some of their life in the Great Lakes. In Lake Superior they usually swim up tributary streams to spawn in the fall.**



-USFWS

**This aerial view of Isle Royale National Park depicts the habitat diversity of this 400 island archipelago located in Lake Superior off Houghton, Michigan. The Fish and Wildlife Service maintains captive brook trout brood stock developed from two stains found at the island complex (Siskiwit River and Tobin Harbor).**

## Sea Lamprey Control in Lake Superior - A "Poplar" Choice for News!

**T**om Meersman, environmental writer for the Minneapolis Star Tribune, traveled to the Poplar River in Northern Wisconsin, to interview Sea Lamprey Control personnel and observe lampricide treatment activities. The interview was in preparation for a future news story about invasive species in Lake Superior. A photographer accompanied the reporter and several pictures were taken during the treatment activities.

*Terry Morse, Marquette Biological Station*

## Genoa National Fish Hatchery assists Corps of Engineers with Annual Fishing Clinic

**T**he Genoa National Fish Hatchery (NFH) recently participated in the Corps of Engineer's annual fishing clinic at Blackhawk Park (Victory, Wisconsin). This year the station presented five, 15 minute talks to 165 adults and children. Participants were briefed on station mission, tools of fisheries managers, Fish and Wildlife Service mission, and how they can play a role in fishery conservation. On display was an aquarium filled with lake sturgeon, freshwater mussels, and other fish species native to the Mississippi River.

This was an excellent opportunity to reach local youth with the importance of fishery conservation and to stress the importance of protecting aquatic resources for future generations. It was also a good opportunity to cooperate with the Corps of Engineers in a project of mutual interest and benefit.

*Doug Aloisi, Genoa NFH*

## Alpena Fishery Resources Office's Partners for Fish and Wildlife Program Coordinator Speaks at Wildlife Workshop

**A**lpena Fishery Resources Office (FRO) biologist Heather Enterline gave a presentation showcasing the Partners for Fish and Wildlife Program and its benefits to private landowners at a July "Wildlife Workshop", sponsored by the Huron Pines Resource, Conservation & Development (RC&D) Office. The workshop was held in Harrisville, Michigan and organized to familiarize Alcona County landowners with the various federal programs available to them. Other speakers included representatives from the Natural Resources Conservation Service, the U.S. Forest Service (fisheries division), and the Huron Pines RC&D Office.

Forty Alcona County riparian landowners along the Pine/VanEtten River Watersheds attended the Wildlife Workshop. These landowners were introduced to the Fish and Wildlife Service's Partners for Fish and Wildlife Program, and how this program can benefit fish and wildlife on their property. Several requested Enterline to visit their property and determine if they qualify for the program.

*Heather L. Enterline, Alpena FRO*

# Cooperation with Native Americans

## Alpena Fishery Resources Office Assists Chippewa Ottawa Resource Authority with Lake Whitefish Surveys in 1836 Treaty Waters

During the month of August, the Chippewa Ottawa Resource Authority (CORA) made an emergency request for help with their fishery independent lake whitefish assessment in 1836 Treaty Waters. The request included the need for a vessel, personnel, and gear to complete the surveys.

Fishery biologists Scott Koproski and Adam Kowalski of the Alpena Fishery Resources Office (FRO) traveled to Sault Ste. Marie, Michigan to assist with the surveys in lake whitefish management units WFH-01, WFH-02, and WFH-03 in Lake Huron and in WFM-03 in Northern Lake Michigan. Two variable mesh gill net gangs of 2700' were fished daily at specified transects within the respective management units. A total of 7 transects, or 14 gill net lifts, were fished while Koproski and Kowalski were assisting CORA. The R/V Karegnondi was used to complete the surveys in cooperation with CORA staff members, Jason Clingamen and Rich Reining.

The Modeling Subcommittee (MSC) of the Technical Fisheries Committee (TFC) is responsible for establishing harvest limits for both lake whitefish and lake trout stocks in 1836 Treaty Ceded Waters. The MSC established a uniform protocol for assessing lake whitefish populations in Treaty Ceded Waters. This survey yields valuable information that is used by the MSC to model lake whitefish stocks in treaty waters and set safe harvest limits. Alpena FRO

assistance to CORA is a prime example of the Fish and Wildlife Service fulfilling Department of Interior obligations as a signatory to the 2000 Consent Decree for effective management of shared fisheries in 1836 Treaty Ceded Waters.

*Scott R. Koproski, Alpena FRO*



-USFWS

**These lake whitefish were captured during a survey in Lake Huron. This native fish is important to the Native American commercial fishery.**

## Stream Quality Surveys on the Oneida Nation Reservation

The Green Bay Fishery Resources Office (FRO) worked cooperatively with the Oneida Tribe of Indians of Wisconsin to sample eleven sites on seven streams within the Reservation. Assessments will help determine biological health and quality of the fishery resources. The objectives were to identify species composition, describe the biological health of each stream, and assist with a Tribal creel survey.

Sampling was performed with electro shocking equipment during the summer. A total of 2,758 fish representing 28 species were sampled during the assessments.

Game fish species sampled included largemouth bass, walleye, northern pike, and smallmouth bass. An Index of Biotic Integrity (IBI) score was calculated for applicable sites to determine the biological health or integrity of each stream. The IBI scores will enable the Oneida Tribe to monitor stream integrity over time and determine the impact land use change has on stream health within the Reservation.

*Stewart Cogswell, Green Bay FRO*

## Lake Whitefish Scales Aged by Green Bay Fishery Resources Office Biologists

Fishery biologists Jessica Richards and Dale Hanson of the Green Bay Fishery Resources Office (FRO) aged more than 2,500 lake whitefish scales to assess year-class abundance and size-at-age for lake whitefish harvested by tribal commercial fisherman in 2002. These lake whitefish were harvested from waters covered under the 2000 Consent Decree (Decree) in Lakes Michigan, Superior, and Huron. Under the Decree, the Tribes agree to stay within harvest quotas that are set by a cooperative, multi-agency group of lake representatives, the Lake Committee, for each of the Great Lakes. These harvest limits are designed to protect whitefish populations from over-harvest, and therefore it is important to know the age compositions and size structure of the fish being harvested. With this information managers can set harvest quotas that allow for the commercial take of whitefish, yet protect enough mature spawning fish to ensure a sustainable fishery.

*Dale Hanson, Green Bay FRO*



# Leadership in Science and Technology

## "Coaster" Brook Trout Stocked into Whittlesey Creek near Ashland, Wisconsin are Part of a Radio Telemetry Study

On August 9th, eighty-four adult brook trout were stocked into Whittlesey Creek near Ashland, Wisconsin, which initiated the stocking experiment and component of a long term plan with Wisconsin Department of Natural Resources (DNR) to establish a self-sustaining population of "coaster" brook trout in Whittlesey Creek. Half of the fish were stocked within Whittlesey Creek National Wildlife Refuge and the other half upstream from private land. The stocked brook trout are descendants of adults collected at Isle Royale National Park and reared at Iron River National Fish Hatchery. Stocking will continue for six more years using eggs, fry, juveniles, and more adults in alternating years. Extensive monitoring will evaluate results.

Twenty-six of the stocked coasters had radio transmitters implanted in their abdomen two weeks prior to the stocking. The objective of this study is to determine distribution, movement, and habitat use of two Lake Superior strains (Tobin Harbor and Siskiwit River) of coaster brook trout introduced into Whittlesey Creek as hatchery-produced adults. Equal numbers of males and females of each Tobin Harbor and Siskiwit River strains were released. Fish and Wildlife Service personnel and volunteers are now tracking and locating the fish to determine their patterns of habitat use and distribution. Targeted tracking is being done with hand-held, portable receiver units from land and water, while fish

movement in and out of Whittlesey Creek is continuously monitored by a remote data logging station positioned less than ½ mile up from the mouth. Results from the first month of the study indicate that some of the fish have moved out to Lake Superior, but the majority stayed in the stream.

"Coasters" are brook trout that live at least part of their life in Lake Superior. Their populations were greatly reduced in the early 1900s by over-fishing and habitat loss. This initiative in Whittlesey Creek is one of many coaster rehabilitation activities underway in Wisconsin.

*Mark Dryer, Ashland FRO*  
*Lee Newman, Ashland FRO*



-USFWS

**Ashland Fishery Resources Office biologist, Lee Newman, is conducting a radio telemetry study on coaster brook trout. Newman tries to locate one of twenty-six radio-tagged fish recently released into Whittlesey Creek near Ashland, Wisconsin.**



-USFWS

**A volunteer carefully stocks a coaster brook trout into Whittlesey Creek near Ashland, Wisconsin. Eighty-four adult brook trout were stocked which initiated a long term plan with the Wisconsin DNR to establish a self-sustaining population.**

## Sea Lamprey Assessment Implements Recommendations to Advance Procedures

Members of the Assessment Unit of the Marquette Biological Station recently completed the field portion of a project that begins implementing recommendations by an expert review panel on ways to improve the quality of science currently being employed to determine which streams and areas to treat with lampricide in the Great Lakes. In one stream tributary to Lake Michigan, several thousand larval sea lampreys were marked, released, and a portion then recaptured during a subsequent lampricide treatment to complete a population estimate for direct comparison to the field estimation techniques currently used. This independent validation is critical to understand the effect of quantitative assessments currently used to select streams for treatment. Several of these mark/recapture comparison population estimates are being planned over the next few years as a way to understand how effective the Fish and Wildlife Service and its

partner, the Department of Fisheries and Oceans Canada, are at suppressing sea lamprey populations in the Great Lakes. The Fish and Wildlife Service delivers a program of integrated sea lamprey control in the U.S. waters of the Great Lakes as a contracted agent of the Great Lakes Fishery Commission. *John Heinrich, Marquette Biological Station*

For more information about the Sea Lamprey Control Program, check out the Great Lakes Fishery Commission Website at:  
[www.glfc.org/lampcon.asp](http://www.glfc.org/lampcon.asp)

### Genoa National Fish Hatchery conducts Lake Sturgeon Diet Trials

The lake sturgeon has for a long time perplexed fish culturists everywhere. Unlike rainbow trout, bluegill, and largemouth bass, lake sturgeon have not been reared successfully on commercial diets. Consequently, lake sturgeon need to be fed an expensive frozen diet of chironomids and adult brine shrimp elevating the feed cost per fish to \$2.00. In an effort to reduce production costs of this unique and nationally rare fish, the National Fish Hatchery (NFH) system is investigating more cost efficient techniques and procedures for the production of lake sturgeon. Disease is also a concern when feeding the frozen diets, which have never been processed, and therefore have the possibility of introducing harmful bacteria. The staff at the Genoa NFH propagate 20,000 to 30,000 six inch sturgeon annually and would benefit from the ability to feed this species commercially produced or modified diets.

During the summer of 2003, an experiment involving 500 lake sturgeon was ran to investigate the ability to convert cultured fish to a commercial diet at an early age (less than a month). Results are mixed. While fish fed a regime of commercial diet mixtures grew at a higher rate than fish fed the natural diets, initial survival was lower. Fish fed a processed diet experienced no disease outbreaks and survived the trial to within 20 percentage points of the controls. A similar experiment was conducted at the Neosho NFH in 2002, and the results appear to be very similar. The insights that this trial has expressed to the program may be substantial. By reducing costs and losses to diseases,

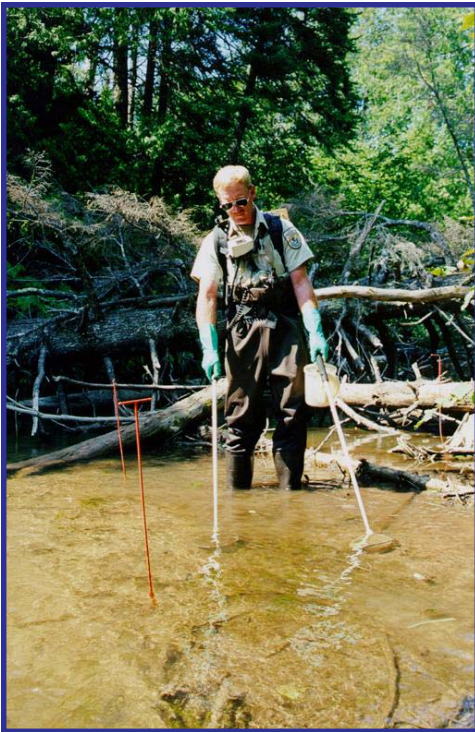
culture programs will have the ability to produce more and healthier fish for restoration purposes throughout the historic range of this ancient fish. The Genoa NFH cooperates with the states of Wisconsin, Minnesota, Missouri, and tribal governments in Wisconsin and Minnesota to annually stock three populations of lake sturgeon.

*Nick Starzl, Genoa NFH*



-USFWS

These young lake sturgeon are part of a diet trial. They are being fed a commercial diet opposed to the traditional fare of expensive frozen chironomids and brine shrimp. If a satisfactory commercial diet can be developed, feed costs will be dramatically reduced.



-GLFC

A sea lamprey control employee assesses a stream for invasive sea lampreys by electrofishing larvae.



-USFWS

If a satisfactory commercial diet is developed for lake sturgeon, the end product will be a yearling fish that can be used for restoration efforts throughout the country.



# Aquatic Habitat Conservation and Management

## Construction of Timber Bridge Begins in Northern Michigan Watershed

Construction officially began August 25 on a timber bridge that will replace two culverts on a northern Michigan watershed. Located on McMasters Creek in the Black River Watershed, Cheboygan County, this project will remove two aging culverts and replace them with a timber bridge. Spearheaded by the Alpena Fishery Resources Office (FRO) Partners for Fish and Wildlife Program, planning for this project began in the spring of 2001, when a National Fish and Wildlife Foundation (NFWF) grant was awarded to the Alpena FRO. Rallying around the NFWF grant, a partnership of Federal, state, and local government agencies and local non-governmental organizations was formed. Repair of this road crossing will open 12 river miles of habitat to brook trout and alleviate the sedimentation input into the creek at the crossing. The timber for this bridge was donated by the State of Michigan. The timber bridge will be installed by the Cheboygan County Road Commission. Construction will be completed in September. Road approaches to the bridge will be hardened with asphalt, and proper ditches and sediment basins installed along Clute Road.

*Heather L. Enterline, Alpena FRO*



-USFWS

**A timber bridge will replace these culverts opening 12 river miles of habitat to brook trout and minimize sedimentation at the crossing. The site is located on McMasters Creek in the Black River Watershed, Cheboygan County, Michigan.**

## Busy Field Season for the Alpena Fishery Resources Office Partners Program

July was a busy month for Alpena Fishery Resources Office (FRO) Partners for Fish and Wildlife (Partners) Coordinator, Heather Enterline. Wetland restoration construction was completed on five sites in Cheboygan, Ogemaw, and Antrim Counties for a total of 15 acres of wetland restored. Nine new initial site visits were completed in six different counties, and stream restoration work crews on the Thunder Bay River, Black River, and Pigeon River worked to restore stream bank erosion sites and improve fish habitat. Several meetings with the Otsego, Montmorency, Antrim, and Cheboygan County Road Commissions resulted in finalized construction plans and dates for bridge building/culvert replacement projects. Jim Hazelman, Assistant Coordinator for the State of Michigan Partners Program, visited the Alpena FRO July 15-16 to view construction and assist Enterline with projects.

The Partners message was expanded with new landowners, non-governmental organizations, and government contacts.

*Heather L. Enterline, Alpena FRO*

## Otsego County, Michigan Road Crossing Project

On August 26th, Biologists Susan Wells and Heather Enterline, Alpena Fishery Resources Office (FRO), conducted a site visit with the Otsego County Road Commission and Timberline Resource, Conservation and Development Office at a road stream crossing project on a tributary of the Au Sable River. This stream provides habitat for resident brook trout. A low and narrow bridge was installed years ago at the site as a temporary crossing. Because the crossing is improperly designed, large amounts of sediment enter the stream at this point. The gravel road washes out annually and many partners have identified it as a problem site and are requesting assistance from the Fish and Wildlife Service. The amount they are requesting is \$45,000 with a 3:1 match to install a bottomless culvert and seal coat the road approaches at the site. This project will be evaluated to determine if it meets criteria for the Fish and Wildlife Service's Fish Passage Program or other funding sources. This is an example of collaboration between federal, state, and local governments and watershed groups to enhance aquatic habitat which will benefit fish and wildlife resources. The project will benefit native brook trout.

*Susan E. Wells, Alpena FRO*

# Workforce Management

## Region 3 Personnel Learn Open Water Motorboat Safety at the Alpena Fishery Resources Office

**M**otorboat Operator Certification Course (MOCC) Open Water Module instructors Adam Kowalski (Alpena FRO), Stewart Cogswell (Green Bay FRO), John Decker (LE Special Agent), Tim Peiffer (Marquette Biological Station), Kyle Krysiak (Marquette Biological Station), and Bob Clevenstine (Rock Island FO) put on a two day open water course and MOCC refresher at the Alpena FRO in August.

A basic Motorboat Operator Certification Course (MOCC) is required for all Fish and Wildlife Service employees who operate motorboats. Each MOCC is comprised of classroom and on the water practical sessions. Several specialized modules have been prepared to equip Service personnel with additional training to perform work assignments including airboats, open water (Coastal/Great Lakes) and moving water. This course provided open water training to those individuals that have already completed the basic MOCC.

The Open Water Module covers all the basic MOCC information on boat orientation, maintenance, required and recommended equipment, rules of the road, aids to navigation, practical exercises and emergency procedures. This course expands on each topic to include pertinent information for operating in open water areas such as sea anchors, drogues, radar reflectors, life rafts, survival suits, zincs and emergency procedures. Additionally, important topics relevant to operations in Coastal areas or in the Great Lakes were covered including charting,

navigation, electronics, waves, tides, weather and situational awareness. Emphasis was placed on 'know before you go' and on assessing risk versus data collection. Highlights from the course included a helicopter rescue demonstration by the U.S. Coast Guard and a visual distress signal (VDS) flare shoot.

The Open Water Module provides the necessary information and skills for Fish and Wildlife Service employees to become safe and reliable open water motorboat operators and crew members. Some personnel may need additional time at their individual stations to practice skills learned and gain valuable experience operating motorboats in the field. *Stewart Cogswell, Green Bay FRO*  
*Adam T. Kowalski, Alpena FRO*



-USFWS

**A Coast Guard helicopter demonstrates rescue operations for participants of the Motorboat Operator Certification Course held at Alpena, Michigan.**

## New Staffer at the Jordan River National Fish Hatchery

**O**n August 24 Timothy Smigielski joined the staff at the Jordan River National Fish Hatchery (NFH) in Elmira, Michigan. Tim received his Bachelor's of Science in Fisheries Biology from Michigan State University in 1988. He began his career working in environmental education and environmental consulting for municipal, private and private non-profit organizations around Detroit, Michigan. For the past 12 years, Tim has been employed with the Michigan Department of Natural Resources (DNR). He got his start with the Michigan DNR Environmental Response Division in 1991. Tim was an Environmental Quality Analyst and coordinator of the Leaking Underground Storage Tank Program out of the Gaylord, Michigan office until 1993. From 1993 until 2000 Tim was a researcher at the Michigan DNR Hunt Creek Research Station in Lewiston, Michigan where he gained a variety of experiences in inland trout biology and stream ecology. Tim also spent 13 months on special assignment as the Fisheries Management Biologist for the Northern Lake Huron Management Unit out of the Gaylord, Michigan office. For the past 3 years Tim has been a researcher at the Charlevoix Great Lakes Research Station where he has been involved with a variety of Great Lakes Research projects including Lake Trout Rehabilitation and coordination of the state-wide coded wire tagging program.

*Rick Westerhof, Jordan River NFH*



# Great Lakes - Big Rivers Regional Fisheries Offices

*Regional Office, 1 Federal Drive, Fort Snelling, MN 55111-4056; 612/713-5111*

## Illinois

Carterville Fishery Resources Office  
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Marion, Illinois 62959  
Greg Conover ([greg\\_conover@fws.gov](mailto:greg_conover@fws.gov))  
618/997-6869

Large Rivers Fisheries Coordination Office  
4469 48<sup>th</sup> Ave. Ct.  
Rock Island, IL 61201  
Jerry Rasmussen ([jerry\\_rasmussen@fws.gov](mailto:jerry_rasmussen@fws.gov))  
309/793-5811

## Michigan

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Jordan River National Fish Hatchery  
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Rick Westerhof ([rick\\_westerhof@fws.gov](mailto:rick_westerhof@fws.gov))  
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Marquette Biological Station  
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Pendills Creek/Hiawatha Forest  
National Fish Hatchery  
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Curt Friez ([curt\\_friez@fws.gov](mailto:curt_friez@fws.gov))  
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## Missouri

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573/234-2132

Neosho National Fish Hatchery  
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Genoa National Fish Hatchery  
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## Fish Lines

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## Windows in time

*A Glimpse into our Proud Past*

*Aerial view of the Lake Mills  
National Fish Hatchery; Lake  
Mills, Wisconsin; 1960*

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